

## ***Editing from the Sequence Editor***

SE-04-0691

## Preparing to edit

The Sequence Editor, selected from the Main Menu, is used primarily for editing tracks which contain MIDI or Synclavier notes. With the Sequence Editor, you can edit whole tracks or selected regions of tracks.

**NOTE:** In order for the Undo button to work, the Undo switch on the Settings dialog must be ON and the top level of your current device must have space equivalent to twice the size of the current sequence.

### Sequence Editor panels

## Using the Sequence Editor

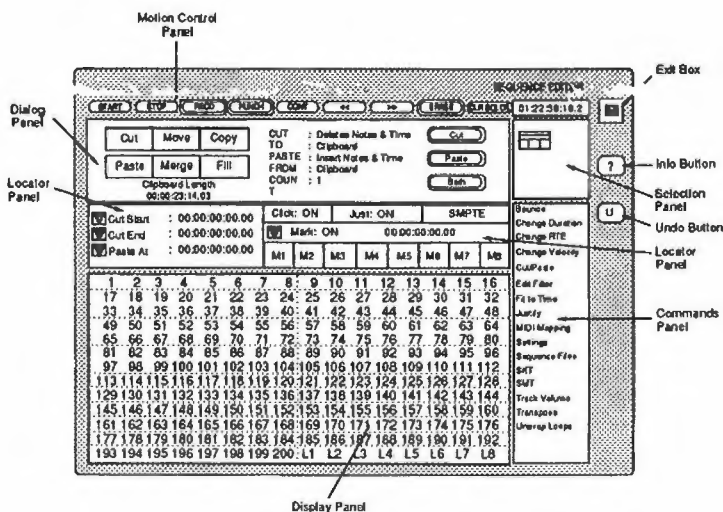
You operate the internal sequencer using the buttons on the motion control panel across the top of the screen.

Edit commands appear in alphabetical order on the commands panel at the right of the screen. Some affect the entire sequence or selected tracks. Other commands allow you to designate edit start and end times so that the change affects only a selected region.

When you select a command from the commands panel, buttons and fields appear in the dialog panel. You complete the command by selecting the appropriate buttons and/or typing in the correct values in the fields. A Cancel button is also available if you decide not to execute the command.

You can reverse the effects of any command immediately after its execution by clicking the Undo button (labeled U and located to the right of the Commands panel). You can also toggle this button to compare the latest edit with the immediately preceding one.

You can move directly to the Recorder Display from the Sequence Editor by clicking the Recorder Display icon in the selection panel. You can return directly to the Sequence Editor from the Recorder Display by pressing Shift-period.



## *Edit time formats and measure length*

The current time of the sequence is shown in the time display at the upper right-hand corner of the Sequence Editor. Other time display fields appear in the Locator panel. The time in all of these time fields can be displayed in any of several different formats.

- seconds
- minutes
- beats (clicks)
- measures and beats
- SMPTE time code
- feet and frames

The Time Display Format switch on the Locator panel, which shows the current format, can be stepped to display another format.

If you use the measures and beats time format, you must set the number of beats (clicks) per measure. The default measure length is four beats. You can set the measure length to a value other than four beats per measure from the Settings dialog.

- Click the Beats/Meas switch and type in a measure length in beats up to a maximum of 128.

The time format and beats-per-measure setting are saved with the sequence.

## Preparing to edit (con't)

<input checked="" type="checkbox"/> Edit Start	: 00:00:00:00.00
<input checked="" type="checkbox"/> Edit End	: 00:00:00:00.00
<input checked="" type="checkbox"/> Edit Length	: 00:00:00:00.00

## Entering Edit times

When using edit commands that allow you to change a selected region of the sequence, you set edit points to define the region. You can use the Edit Start and Edit End fields on the left side of the Locator panel or the Edit Start and Edit Length fields. You can enter the desired values in any of the following ways.

- Drag a value from a memory button or another time display.
- Step a segment of the time display to increase or decrease that segment.
- Type in a new value following the procedures on the opposite page.
- Click the Take button to the left of the time field.

If the command instructions in the Dialog panel require that you enter time values, the above procedures also apply.

When you type in time values, zeros to the right of the decimal point may be omitted. Zeros to the left of a colon may be omitted where noted below.

format	default	enter value
beat (click)	1.00	[beat #] [period] [fraction]
meas/beat*	0:1.000	[meas #] [space] [beat #] [period] [fraction]
SMPTE**	00:00:00:00.00	[hours] [min] [sec] [frames] [period] [bits]
feet/frames***	0:00.00	[feet] [space] [frames] [period] [fraction]
seconds	0.000	[seconds] [period] [fraction]

\* If beat or click 1 is desired, enter only the measure number.

\*\* Zero values for hours and minutes can be omitted.

\*\*\* Zero value for feet can be omitted.

## ***Edit Filter—Defining the scope of editing changes***

The Edit Filter defines the pitches, durations or real-time effects that are affected by changing duration or velocity, cutting or transposing.

For example, you may want to increase the volume (controlled by velocity) of only the softest notes in a passage. You can set the Edit Filter so that the Change Velocity command affects only those notes with velocity values below a certain level.

The general procedure for using the Edit filter is as follows:

1. Click on Edit Filter in the Commands panel.
2. Set the Edit Filter that appears in the Dialog panel as desired. Type in values as needed or step them higher or lower. Click the RESET FILTER button at the bottom of the Dialog panel to reset all filter items to their default settings. Click DONE at the bottom left of the Dialog panel or another command from the Commands panel to set the filter as shown.
3. Select the desired command from the Commands panel.
4. Toggle the Filter switch (the word OFF) to ON on the Dialog panel.
5. Execute the command.

The Edit Filter is set by default to allow all pitches, all velocities, all durations and all controller values to be affected by the selected operation.

The Edit Filter works with the following commands:

command	active filters
Change Duration	pitch, velocity, duration
Change Velocity	pitch, velocity, duration
Cut	all filters
Transpose	pitch, velocity, duration

Bounce  
Change Duration  
Change RTE  
Change Velocity  
Cut/Paste  
**Edit Filter**  
Fit to Time  
Justify  
MIDI Mapping  
Settings  
Sequence Files  
SKT  
SMT  
Track Volume  
Transpose  
Unwrap loops

## ***Editing whole tracks***

The Bounce, SMT, Track Volume and Unwrap Loops commands affect the entire sequence or track. You do not set edit points with these commands.

**Note:** Tracks cannot be soloed from the Display panel while the Bounce instructions are on the Dialog panel.

## ***Bounce—Copying or moving tracks***

When you bounce notes from one track to another, you can either **copy** the notes and leave the source track unaffected, or you can **move** the notes and erase the source track. In either case, the bounced notes are merged with any notes on the destination track. If the destination track is not empty, its timbre must match that of the source track.

Bounce operates on the entire track. It is not affected by edit time settings. If you have a 96-voice poly system, track timbre poly bin assignments are bounced along with the notes and timbre.

1. Click Bounce in the Commands panel to bring up the Bounce dialog.
2. Select the type of bounce by toggling COPY or MOVE.
3. Select the source and destination tracks by clicking on the desired tracks in the Display panel or by typing in a track number and pressing Return.
4. Click on the BOUNCE button in the lower left corner of the Dialog panel.

The selected track is copied or moved to a selected track.

To cancel the command, Click the CANCEL button.

## ***SMT—Replacing track timbres***

You can replace a track timbre with a timbre from a timbre file, another track or the keyboard.

1. Click SMT in the Command panel. The following appears in the Dialog panel.

### **COPY TIMBRE**

From:	KEYBOARD	
To :	TRACK	1

2. If you want to replace the track timbre with a timbre from another track in the same sequence or from a timbre file, step KEYBOARD until the desired source appears.
3. Select the specific destination and source by clicking numbers below in the Display panel. For example, to place the Bank 4, Entry 7 timbre on track 9, click on 9, 4 and 7 in the Display panel in that order.

You can also step a number field or click on it and type in the desired number.

4. Click the SMT button in the lower left corner of the Dialog panel.

The desired timbre is placed on the selected track.

To cancel the command, click the CANCEL button.

**Note:** Tracks cannot be soloed from the Display panel while the SMT instructions are on the Dialog panel.



**Track Volume—Setting or scaling track volume**

The Track Volume command changes track volumes on soloed tracks, or on all tracks if none are soloed. You can set soloed track volumes to a specific level or scale them to a percentage of the current values.

1. Click on the Track Volume command in the Commands panel.

The Track Volume dialog appears.

2. Solo the tracks whose volumes are to be changed by clicking on the track numbers in the Display panel.
3. Toggle SET or SCALE. If you choose SET, all soloed tracks are set to the volume entered in the Track Volume field. If you choose SCALE, all soloed tracks are scaled up or down by the percentage entered in the Track Volume field.
4. Enter volume (0-100%) or percentage to scale (1 to 999.9%) in the Track Volume field.
5. Click the SET or SCALE VOLUME button in the lower left corner of the Dialog panel.

A message appears to the right of the CANCEL button.

Working...

When the message disappears, the selected track volumes are set as specified.

To cancel the command, Click the CANCEL button.



## ***Unwrap loops—Removing independent loops***

You can remove an independent loop from a track in the current sequence and have the notes of the looped section copied repeatedly into the sequence for a specified length of time. This is called “unwrapping loops.”

1. Click on the Unwrap Loops command in the Commands panel.

Instructions for unwrapping loops appear in the Dialog panel.

2. Enter an End Time by typing in a value, dragging a time from another time field or Memory button, or by stepping segments of the End Time.
3. Solo tracks to unwrap, or clear solos to unwrap all loops.
4. Click the UNWRAP button in the lower left corner of the Dialog panel.

The following message appears to the right of the UNWRAP and CANCEL buttons:

Working...

When the message disappears, the track(s) soloed contains no loops. The notes from the loops are repeated until the specified end time.

To cancel the command, click the CANCEL button.

**Note:** It is not possible to unwrap loops if a live click track is used.

## ***Cutting and pasting***

The Cut/Paste command allows you to duplicate and move sections of a track or sequence anywhere. It is especially useful in rearranging sound events and in composing, arranging and copying music.

## ***Cut/Paste—Cutting and pasting***

You can cut, move or copy any part of a sequence to the clipboard or to a disk file. You can also cut or move any part of a sequence to nowhere.

You can paste from the clipboard or from a disk file into the same sequence or any other sequence at any point on any track or tracks. You can also paste silence (rests) into any part of a sequence, including part of a single track, several tracks or all tracks.

If the Edit Filter is on, only those notes defined by the filter are placed in the clipboard or file. Notes cut or moved but not passed by the filter are discarded.

When you cut to the clipboard, you are placing the selected section into an area of computer memory not part of the sequence. The selected section remains on the clipboard—even if you erase the sequence—until another section is cut or copied or until you leave the Real-Time Performance system.

The size of a cut is limited by the size of your system .work file. If you are cutting to a disk file, it is also limited by the amount of contiguous space in the current catalog. The size of a paste is limited only by the amount of external memory\* in your system. If a paste would make the current sequence larger than the notespace in the internal sequencer, the following message appears.

Resulting sequence is too long

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\* External memory refers to the number of M128 or M512 boards in the system.

## *Cut and paste options*

You have a choice of three types of cuts.

<b>type</b>	<b>destination</b>	<b>result</b>
<b>Cut</b>	Clipboard, File or Nowhere	Removes notes and time to selected destination. Notes following the cut are moved backward so that no gap occurs.
<b>Move</b>	Clipboard, File or Nowhere	Removes notes to selected destination. Notes following the cut section remain undisturbed. Rests replace the removed notes.
<b>Copy</b>	Clipboard or File	Copies notes and time to selected destination. The source sequence is not changed.

You have a choice of three types of pastes.

<b>type</b>	<b>source</b>	<b>result</b>
<b>Paste</b>	Clipboard, File or Silence	Inserts notes and time from selected source. Notes after the insert point are moved forward to make room for the inserted section.
<b>Merge</b>	Clipboard or File	Merges notes from selected source with the notes after the insert point.
<b>Fill</b>	Clipboard or File	Replaces notes after the insert point with notes from the selected source.

## ***Cutting and pasting (con't)***

### ***Cutting***

1. Click on Cut/Paste in the Commands panel.
2. In the Cut/Paste dialog, set the cut options to Cut, Move or Copy .
3. Set the destination to Clipboard, File or Nowhere by stepping the switch after TO in the Dialog panel. Type in a filename or tree name if File is selected.
4. Enter Start and End time; type them in, drag them from other time fields or memory buttons or click the appropriate Take buttons. (See "Entering Edit times" in the section "Preparing to edit.")
5. Solo source track or tracks.
6. If a filter designed using the Edit Filer command is to be used, turn it on by stepping the Filter switch at the bottom of the Dialog panel.

With the Edit Filter is ON, a cut removes all notes and time, but only those notes or sounds defined by the filter are placed in the clipboard or file.

7. If you want to cut and paste in one operation, set up the paste as instructed on the following page.
8. Click on the CUT, MOVE or COPY button (or the BOTH button if you are cutting and pasting in one operation) on the right of the Dialog panel.

The selected section is cut, moved or copied to the clipboard, a disk file or nowhere. If it goes to a disk file, it is automatically given an overall loop.

Listen to the results or check with the Recorder Display. If they are not what you expected, click UNDO.

## *Pasting*

1. Click on Cut/Paste in the Commands panel.
2. In the Cut/Paste dialog, set paste options to Paste, Merge or Fill.
3. Set paste source to Clipboard, File or Silence by stepping the switch after FROM in the Dialog panel. If File is selected, type in the treename of a file with an overall loop. Type in a time length if silence is selected.
4. Set a Paste, Merge or Fill At time; type it in, drag it from another time field or memory button, or click the appropriate Take button. (See "Entering Edit times" in the section "Preparing to edit.")
5. Solo the destination track or tracks.

If you solo more tracks than you cut, the additional tracks are filled by repeating part or all of the paste beginning with the first track. If you solo fewer tracks than you cut, only the soloed tracks are filled, and the additional tracks in the clipboard or file are ignored. If you do not solo destination tracks, an error message appears.

6. If you want to paste the material into the sequence repeatedly on the same track(s), enter the appropriate number after the word Count in the middle of the Dialog panel.
7. If you want to cut and paste in one operation, make sure the cut function is set up as described above.
8. Click on the PASTE, MERGE or FILL button (or the BOTH button if you are cutting and pasting in one operation) on the right of the Dialog panel.

The source material is placed in the destination sequence at the selected time on the soloed track or tracks the selected number of times.

Listen to the results or check with the Recorder or Music Notation Displays. If they are not what you expected, click UNDO.

## Editing values

You can edit most of the recorded values that define and control a note or sound using Sequence Editor commands.

## Change Duration—Changing the length of notes

You can adjust the duration of all the notes of any selected track or region. You can set the duration of each note to a single value or you can scale the notes longer or shorter. You can also add or subtract a value or values that gradually lengthen or shorten throughout the region. Values are displayed in the selected time display format.

1. Select a region by setting Start and End times.
2. Solo tracks to be changed.
3. Click Change Duration in the Commands panel.

The Change Duration dialog appears.

4. Select type of change to be made by stepping the line left of the number field in the Dialog panel.
5. Set values by typing them in or stepping them.
6. If you want to use the Edit Filter, toggle the Filter switch at the bottom of the Dialog panel to ON. (See "Edit Filtering" in the section "Preparing to edit.")
7. Click the CHANGE DURATION button at the lower left of the Dialog panel to make the desired changes, or the CANCEL button to quit.

## Change Duration options

Set durations to:	Duration of each note set to a constant value.
Scale durations by:	Durations of notes scaled up or down a percentage of the current value with a minimum or maximum value if desired.
Add to current value:	Plus or minus value added to the duration of notes with a minimum or maximum value if desired.
Slope from: to:	Increasing or decreasing value added to duration of notes.

## Change RTE—Changing real-time effects values

You can edit selected real-time effects with the Change RTE command.

1. Select a region for change by setting Start and End times.
2. Solo tracks to be changed.
3. Click Change RTE in the Commands panel.
4. In the Change RTE dialog, select the desired RTE by setting the switch labeled RTE to change, in the Dialog panel.

Selections include Pedal 1, Pedal 2, Mod Wheel, Breath Controller, Pitch Bend and Ribbon.

5. Select type of change to be made by stepping the line just left of the number field in the Dialog panel.
6. Set values for change (0-100%) by stepping them or typing them in. Set minimum or maximum values if desired.
7. Click the CHANGE RTE button at the lower left of the Dialog panel or the CANCEL button to quit.

Set RTE to:	Level of the selected RTE set to a constant value.
Scale RTE by:	Levels of the selected RTE scaled up or down a percentage of the current values with a minimum or maximum value if desired.
Add to current value:	Plus or minus value added to the levels of the selected RTE with a minimum or maximum value if desired.
Slope from: to:	Increasing or decreasing value added to real-time effect.

*Change real-time effects options*



**Change Velocity—Changing velocity values**

Velocity values of selected notes or sounds can be adjusted using the Change Velocity command.

- 1. Select a region for change by setting Start and End times.
- 2. Solo tracks to be changed.
- 3. Click Change Velocity in the Commands panel.

The Change Velocity dialog appears.

- 4. Select type of change to be made by stepping the line just left of the number field in the Dialog panel.
- 5. Set values for change by stepping them or typing them in. Set minimum or maximum values if desired.
- 6. If you want to use the Edit Filter, toggle the Filter switch at the bottom of the Dialog panel ON. (See "Edit Filter" in the section "Preparing to edit.")
- 7. Click the CHANGE VELOCITY button at the lower left of the Dialog panel to make the desired changes, or the CANCEL button to quit.

The changes are made on the region and tracks selected.

*Change Velocity options*

Set Velocity to:	Velocity set to a constant value.
Scale Velocity by:	Velocity scaled up or down a percentage of the current values with a minimum or maximum value if desired.
Add to current value:	Plus or minus value added to Velocity with a minimum or maximum value if desired.
Slope from: to:	Increasing or decreasing value added to Velocity.

## ***Fit to Time—Fitting a sequence to a length of time***

You can expand or compress any section of the current sequence to fit a designated length of time. You can leave the durations of the individual sounds or notes unchanged, letting them overlap if the sequence is compressed or inserting silence between them if the sequence is expanded. Or you can choose to have them scaled to match the time adjustment.

When you use this feature, the starting times of all notes in the selected region are adjusted. However, the click of the internal digital metronome remains at its original setting and speed.

If you want to use the sequence where the relationship of click to sound is important, you should create a click track of quarter notes justified to the original beat before doing the fit-to-time operation. (See "Click tracks" in the section "Recording.")

The clicks of the click track will be affected by the fit-to-time operation along with the other tracks in the selected region. Thus a click generated by the click track maintains its relationship to the sequence sounds.

*(Instructions continued on following page)*

parameter	result
new End Time	Changes End Time set in Locator panel. The Region Length is automatically adjusted to reflect the new End Time.
new Region Length	Changes the Region Length. The End Time set in the Locator panel is automatically adjusted to reflect the new Region Length.
percentage to scale	Changes the Region Length by a percentage of the Region Length defined by the Start and End times in the Locator panel. The Start Time remains the same and the End Time changes to reflect the new Region Length.

*Fit-to-Time parameters*

## Editing values (con't)

### **Fit to Time—Fitting a sequence to a length of time (con't)**

1. Select a region by setting Start and End times in the Locator panel.
2. Click on Fit to Time in the Commands panel.

The Fit-to-Time dialog appears in the Dialog panel.

3. Enter end time, region length or percentage to scale parameters. (See fit-to-time parameters on the previous page.)
4. Enter options as desired (see below).
5. Click the FIT TO TIME button on the Dialog panel.

The speed and length of the region are adjusted according to the parameters and options selected.

7. Listen to the sequence. Use the Undo button to return to the previous version if the results are not what you expected.

Fit Instantly	Selected changes occur exactly at the Edit Start time set in the Locator panel.
Fit Gradually	Note starting times (not durations) adjusted gradually over entire edit region.
Scale Durations: Yes	Durations scaled to the overall percentage of time compression or expansion selected. With Fit Instantly, no silences or overlaps occur between notes. With Fit Gradually, silences and overlaps may occur.
Scale Durations: No	Durations unchanged from original. When time is compressed, notes may overlap; when time is expanded, silences occur between notes.
Stay at new speed: Yes	After changed region, sequence remains at new speed.
Stay at new speed: No	After changed region, sequence returns to original speed.

#### *Fit to Time options*

## ***Transpose—Changing pitches***

The Transpose command transposes a region of a track or tracks, or all tracks if none are soloed, by changing the pitches in the notelist.

1. Select the region to be transposed by entering times in the Start and End fields in the left half of the Locator panel.
2. Solo the tracks to be transposed by clicking on the desired track numbers in the Display panel. If none are soloed, all tracks will be transposed.
3. Click on the Transpose command in the Commands panel.

Instructions for transposing appear in the Dialog panel.

4. Define an interval for the transposition by clicking on either of the two pitch fields and typing a pitch name. Specify all accidentals in terms of sharps (#).

The interval of transposition is the difference between the two pitches. For example, if the first pitch field is C3 and you type E3 into the second pitch field, the notes in the selected section are transposed up a major third (all C3's become E3's).

5. If a filter is to be used, turn it on by stepping the Filter switch at the bottom of the Dialog panel. (Filters are designed using the Edit Filter command.)
6. Click the **TRANSP** button in the lower left corner of the Dialog panel.

When the message, *Working...*, disappears, all notes in the selected section of the selected tracks are transposed as specified.

To cancel the command, click the **CANCEL** button.

Listen to the results or check with the Recorder or Music Notation Displays. If they are not what you expected, return to the Sequence Editor and click the **UNDO** button.

## **Editing values (con't)**

### ***Justify—Justifying a region***

With the Sequence Editor Justify command, you can justify notes or sounds that have been recorded slightly ahead or behind the beat. The command allows you to justify some notes without justifying others, so that the “live” rhythmic feeling is not lost. For example you might leave notes close to the beat unjustified while justifying notes further off the beat.

1. Select a region by setting Start and End times.
2. Solo the tracks to be changed.
3. Click on Justify in the Commands panel.

The Justify dialog appears in the Dialog panel.

4. Set a Click Multiplier.

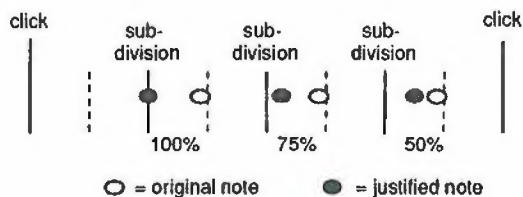
Inaudible clicks are added to subdivide each click by the selected number. Notes are justified to each of these subdivisions.

5. Set justification values by typing them in or by stepping each one up or down. See the information and illustrations opposite.
6. If you want to use the Edit Filter, toggle the Filter switch at the bottom of the Dialog panel ON. (See “Edit Filter” above.)
7. Click the JUSTIFY button at the lower left of the Dialog panel to make the desired changes, or the CANCEL button to quit.

The changes are made on the region and tracks selected.

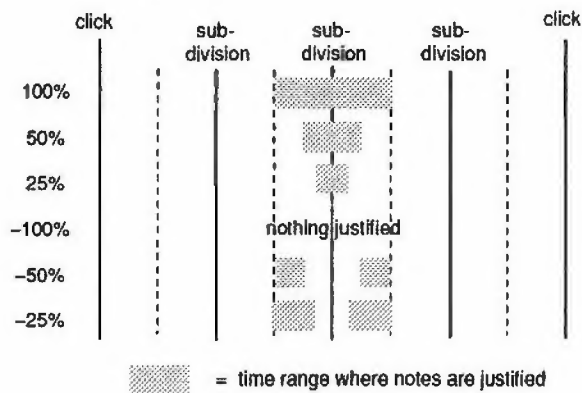
### Percent to Justify (1 to 100%)

Sets the amount of justification to be applied.



### Effective Range (-100% to 100%)

Selects the time range in which notes or sounds are to be justified.



### Grid Offset (-1000 ms to 1000 ms)

Selects an offset for justification in relation to the click.

